

TRAFFIC IMPACT ANALYSIS

SWEETWATER PLACE

County of San Diego, California

July 2015

General Plan Amendment GPA-14-003; Rezone REZ-14-003;
Tentative Map Condominium TM-5588 RPL-1;
Site Plan STP-14-015 RPL-1; Environmental Log No. ER-14-19-005

General Plan Amendment GPA-14-003; Rezone REZ-14-003;
Tentative Map Condominium TM-5588 RPL-1:

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Prepared by:

Shankar Ramakrishnan, P.E.
Senior Transportation Engineer
&
Renald Espiritu
Transportation Engineer I

Under the Supervision of:

John Boarman, P.E.
Principal

**Linscott, Law &
Greenspan, Engineers**

4542 Ruffner Street
Suite 100
San Diego, CA 92111

858.300.8800 T

858.300.8810 F

www.llgengineers.com

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1.0 INTRODUCTION

Linscott, Law & Greenspan Engineers has been retained to assess the traffic impacts of the proposed Sweetwater Place project. The project site is located on the northeast corner of the Sweetwater Springs Boulevard/ Jamacha Boulevard (SR-54) intersection in the County of San Diego. The project proposes to develop 122 condominium units and a public park on the site. This study determines the potential traffic impacts of the proposed project on the study area roadway network.

The following sections are included in this report:

- Project Description
- Existing Conditions Assessment
- Traffic Analysis Approach & Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Project Trip Generation, Distribution and Assignment
- Cumulative Projects Discussion
- Near-Term Analysis
- Long-Term Analysis
- Access and Other Issues
- Significant Impacts and Mitigation Measures

2.0 PROJECT DESCRIPTION

2.1 Project Location

The proposed project is located on the northeast corner of the Sweetwater Springs Boulevard/ Jamacha Boulevard (SR-54) intersection in the County of San Diego. Primary access to the site is proposed via an existing signalized intersection at Jamacha Boulevard (SR-54)/ Folex Way. Regional access to the project site is provided via Jamacha Boulevard (SR-54) and Campo Road (SR-94). The Assessor's Parcel Number is 505-231-36.

Figure 2-1 shows the general vicinity of the project and **Figure 2-2** shows a more detailed project area map.

2.2 Project Description

The project proposes to develop 122-condominium units and a 2.08 acre public park.

The traffic study originally analyzed a 126-unit project with a 1.14-acre park. The now proposed project of 122-units would generate less traffic than analyzed in the original traffic study. The study was not revised to reflect the diminished project and therefore reflects a conservative analysis.

Figure 2-3 shows the proposed site plan.

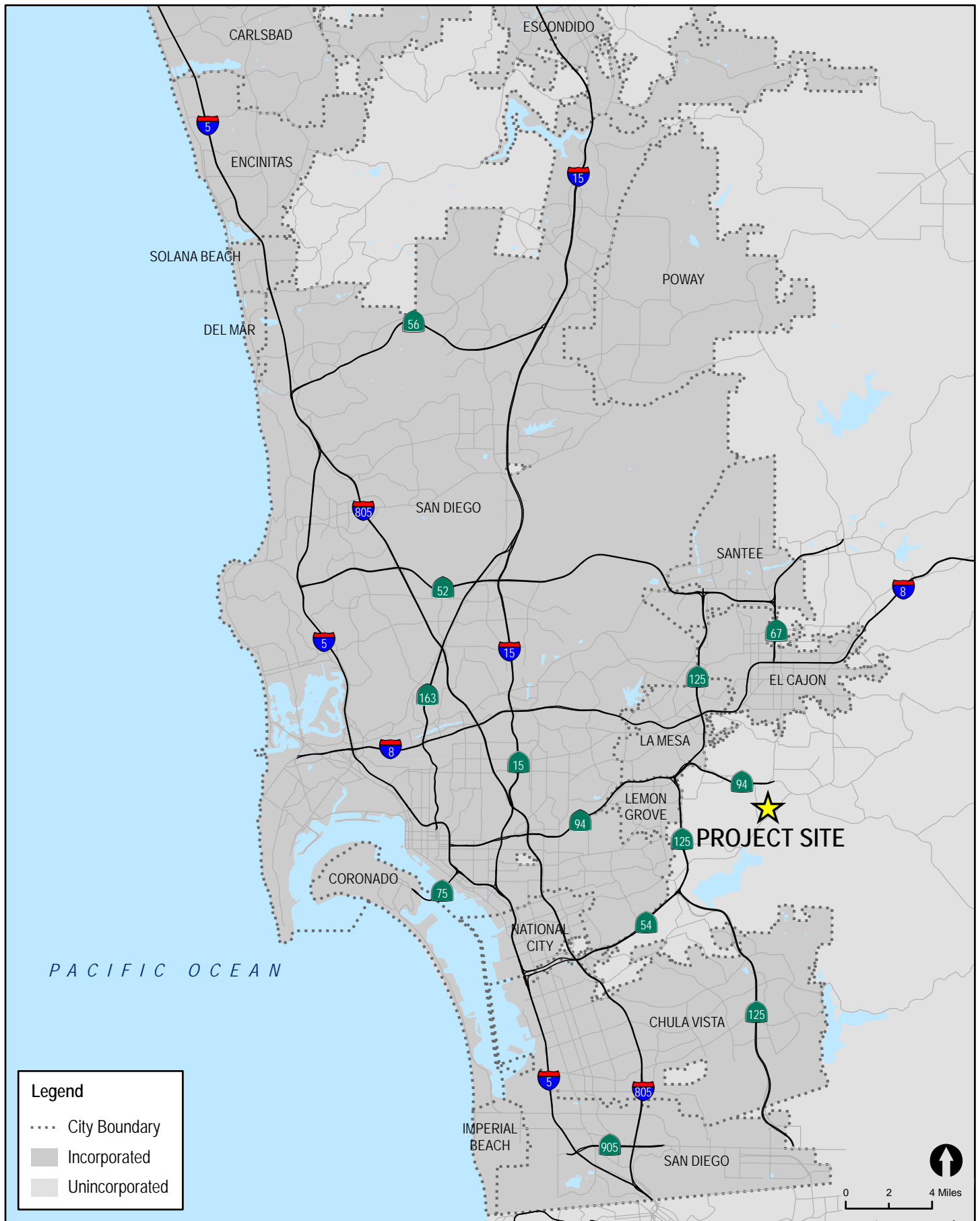
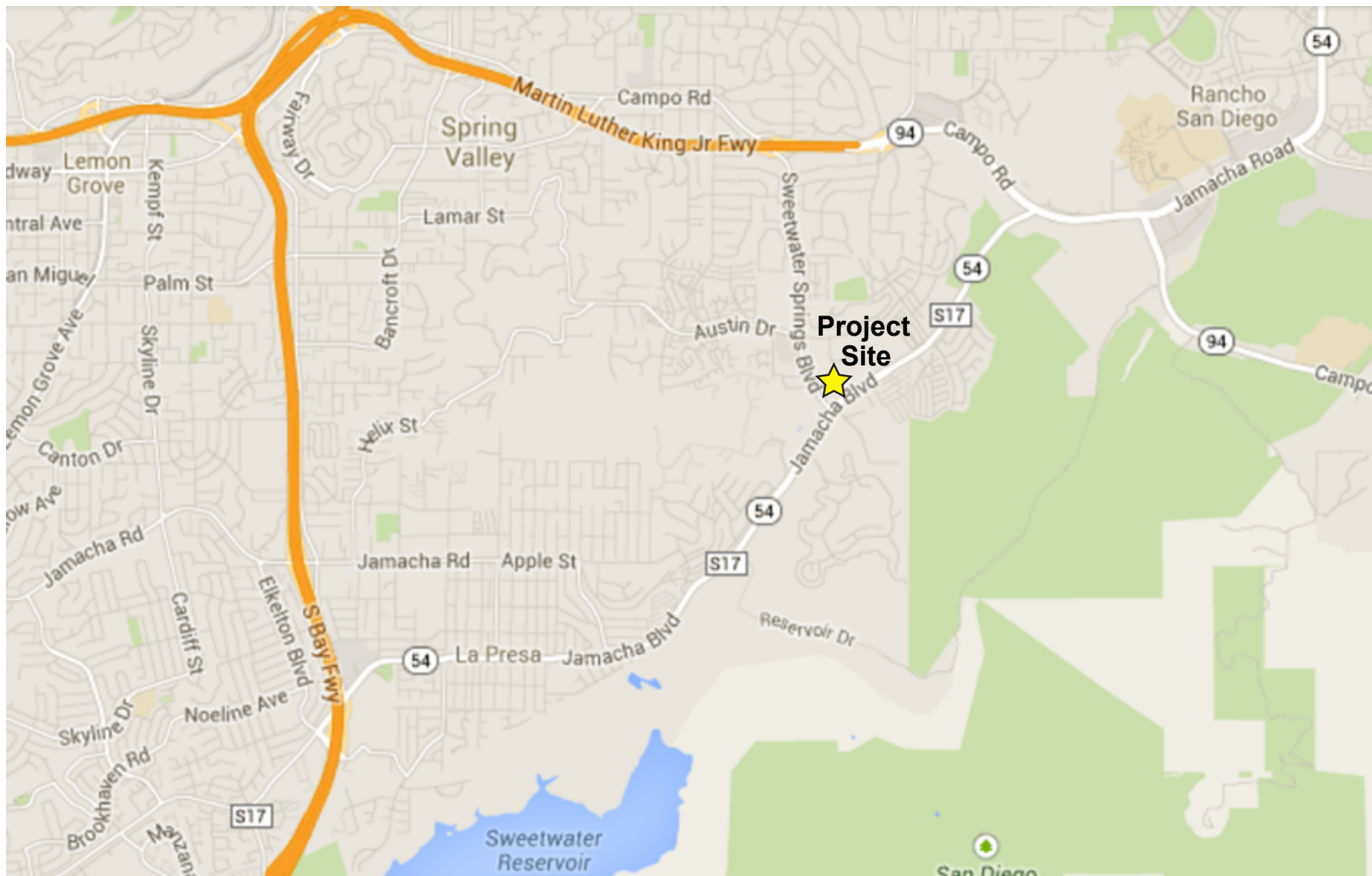


Figure 2-1

Vicinity Map

SWEETWATER PLACE



3.0 EXISTING CONDITIONS

This study analyzes the following intersections and segments based on the anticipated assignment of project traffic.

Intersections

1. Sweetwater Springs Boulevard/ SR-94 WB On-Ramp/ Agua Dulce Boulevard
2. Sweetwater Springs Boulevard/ SR-94 EB Ramps
3. Sweetwater Springs Boulevard/ Austin Drive
4. Sweetwater Springs Boulevard/ Project Driveway #1
5. Sweetwater Springs Boulevard/ Jamacha Boulevard (SR-54)
6. Jamacha Boulevard (SR-54)/ Huron Street/ San Diego Street
7. Jamacha Boulevard (SR-54)/ Project Driveway #2/ Folex Way
8. Jamacha Boulevard (SR-54)/ Campo Road (SR-94)
9. Campo Road (SR-94)/ Jamacha Road (SR-54)

Segments

1. Sweetwater Springs Boulevard between SR-94 EB Ramps and Austin Drive
2. Sweetwater Springs Boulevard between Austin Drive and Jamacha Boulevard (SR-54)
3. Jamacha Boulevard (SR-54) between San Miguel Street and Huron Street
4. Jamacha Boulevard (SR-54) between Huron Street and Sweetwater Springs Boulevard
5. Jamacha Boulevard (SR-54) between Sweetwater Springs Boulevard and Folex Way
6. Jamacha Boulevard (SR-54) between Folex Way and Campo Road (SR-94)

3.1 Existing Roadway Conditions

The following is a description of the nearby roadway network:

Sweetwater Springs Boulevard is classified as a *4.1A – Major Road with a raised median* (north of Jamacha Boulevard) and an unclassified roadway (south of Jamacha Boulevard) on the *County of San Diego General Plan Mobility Element* within the study area. It is currently constructed as a four-lane undivided roadway with a two-way left-turn lane north of Jamacha Boulevard (SR-54) and a two-lane undivided roadway south of Jamacha Boulevard (SR-54). Bus stops and bike lanes are provided. Curbside parking is provided intermittently. The posted speed limit is 45 mph north of Jamacha Boulevard (SR-54) and 30 mph south of Jamacha Boulevard (SR-54).

Jamacha Boulevard (State Route 54) is classified as a *4.1A – Major Road with a raised median* on the *County of San Diego General Plan Mobility Element* within the study area. It is currently constructed as a four-lane roadway with mid-block left-turn pockets and two-way left-turn lanes (TWLTL) provided intermittently. Bus stops and bike lanes are provided. Curbside parking is prohibited and the posted speed limit ranges between 45-50 mph.

Campo Road (State Route 94) is classified as a *6.1 Expressway* on the *County of San Diego General Plan Mobility Element* within the study area and is currently built as a four to five-lane divided roadway. Curbside parking is prohibited and the posted speed limit ranges between 45-55 mph.

Figure 3-1 depicts the existing traffic conditions and the study area intersections and segments graphically.

3.2 Existing Traffic Volumes

3.2.1 Peak Hour Intersection Volumes

Weekday AM/PM peak hour intersection turning movement volume counts were commissioned at five (5) of the eight (8) study area intersections on Thursday, March 27, 2014. The intersection counts were conducted between the hours of 7:00-9:00 AM and 4:00-6:00 PM to capture peak commuter activity.

The traffic counts at the remaining three (3) intersections were supplemented from the other traffic studies that are currently under process by LLG. The counts for these three (3) intersections were conducted in November 2013.

3.2.2 Daily Segment Volumes

Bi-directional daily traffic counts were conducted at four (4) of the six (6) study area street segments on Thursday, March 27, 2014. The traffic counts at the remaining two (2) street segments were supplemented from the other traffic studies that are currently under process by LLG. The counts for these two (2) segments were conducted in November 2013. **Table 3-1** is a summary of average daily traffic volumes (ADTs) for the key roadway segments in the project vicinity.

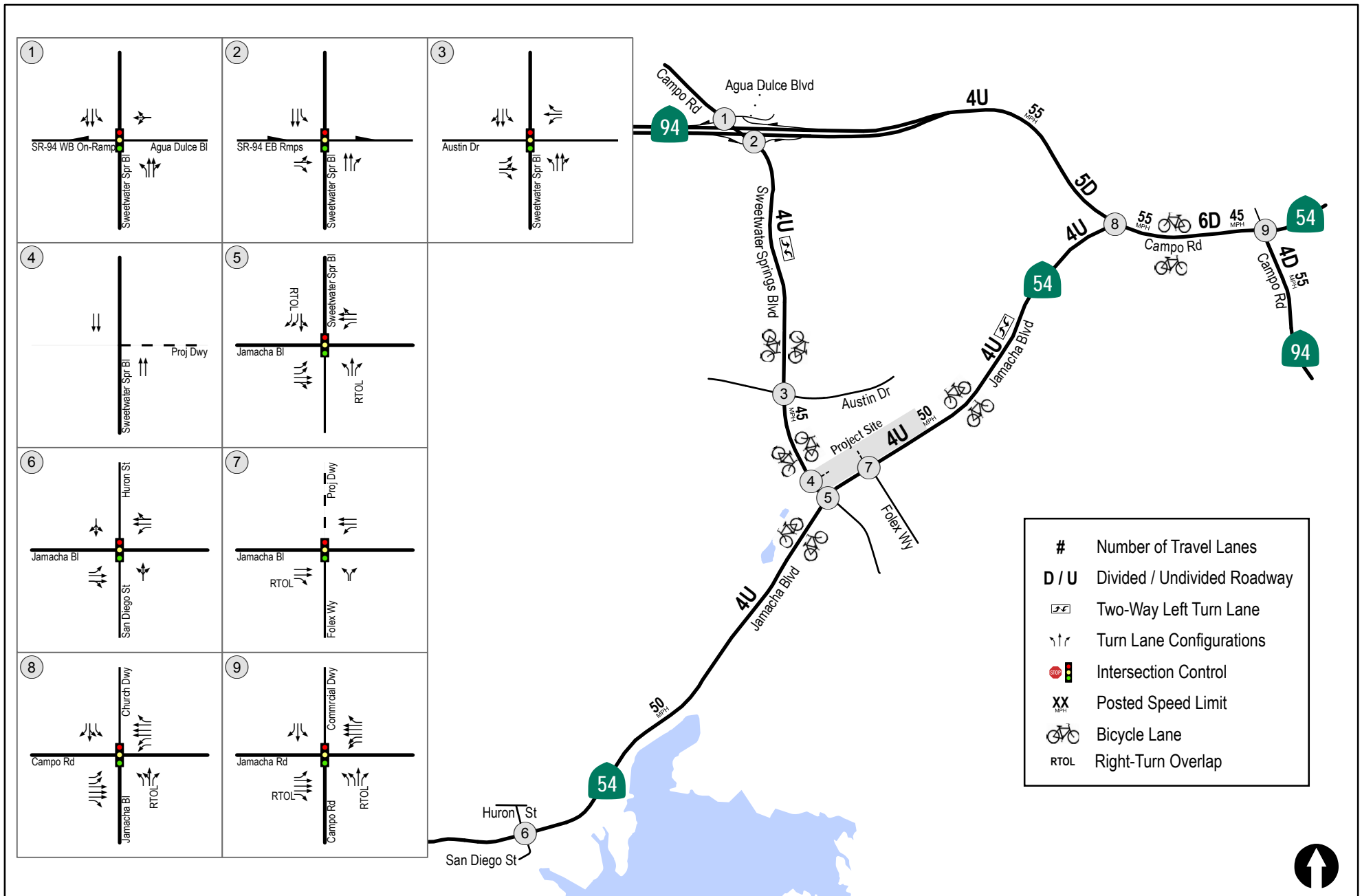
Appendix A contains the peak hour intersection and segment count sheets. **Figure 3-2** shows the existing traffic volumes.

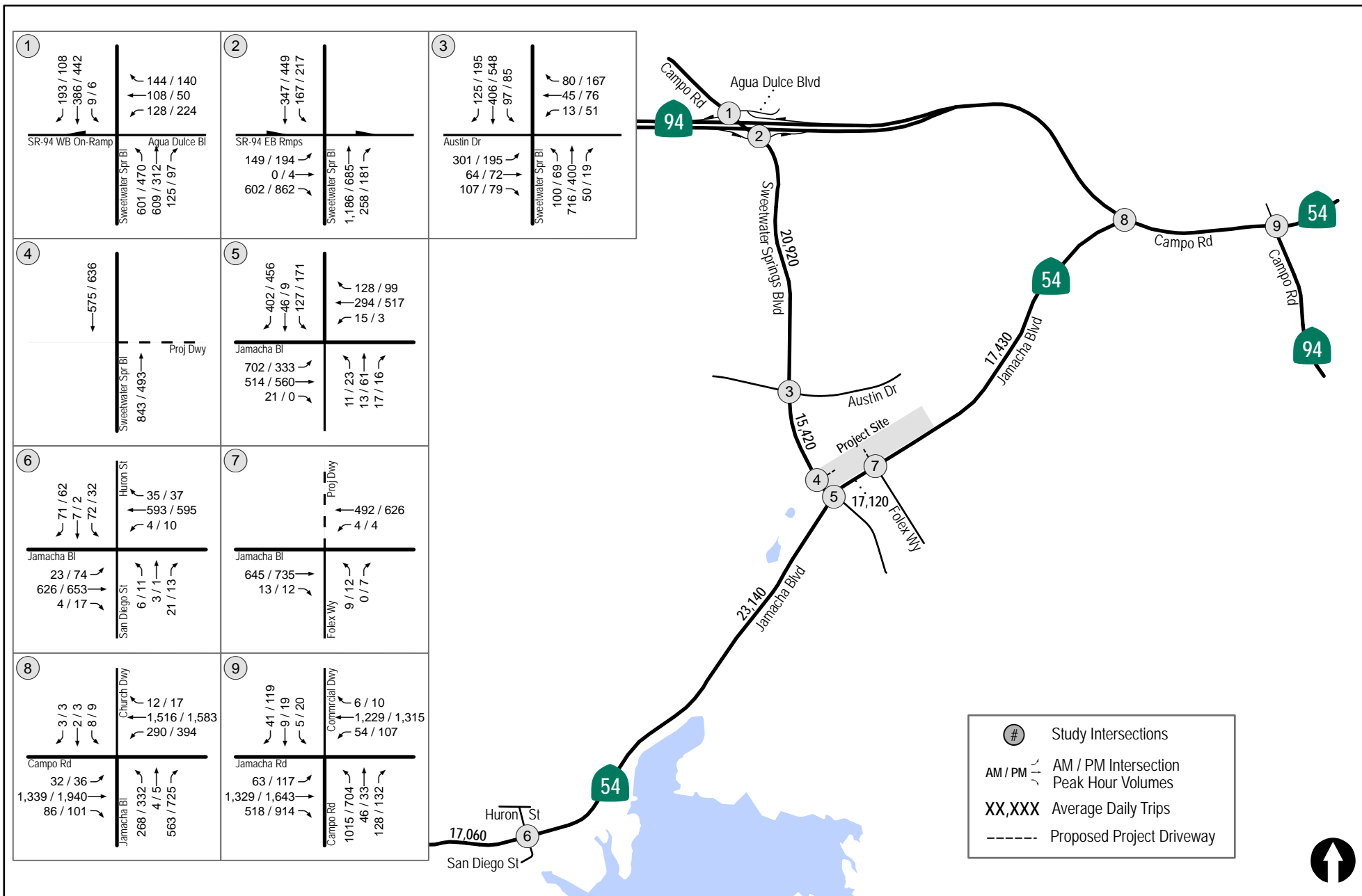
TABLE 3-1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT ^a	Date	Source
Sweetwater Springs Blvd			
SR-94 EB Ramps to Austin Dr	20,920	March 2014	LLG
Austin Dr to Jamacha Boulevard (SR-54)	15,420	March 2014	LLG
Jamacha Blvd (SR-54)			
San Miguel St to Huron St	17,060	March 2014	LLG
Huron St to Sweetwater Springs Blvd	23,140	November 2013	LLG
Sweetwater Springs Blvd to Folex Wy	17,120	March 2014	LLG
Folex Wy to Campo Rd (SR-94)	17,430	November 2013	LLG

Footnotes:

- a. Average Daily Traffic Volumes.





4.0 ANALYSIS APPROACH AND METHODOLOGY

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized intersections, unsignalized intersections and roadway segments.

4.1 Intersections

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 16 of the *2000 Highway Capacity Manual (HCM)*, with the assistance of the *Synchro* (version 7) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS). Signalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in **Appendix B**.

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapter 17 of the *2000 Highway Capacity Manual (HCM)*, with the assistance of the *Synchro* (version 7) computer software. Unsignalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in **Appendix B**.

4.2 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the County of San Diego's *Roadway Classification, Level of Service, and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The County of San Diego's *Roadway Classification, Level of Service, and ADT Table* is attached in **Appendix C**.

5.0 SIGNIFICANCE CRITERIA

The following criterion was utilized to evaluate potential significant impacts, based on the *County of San Diego Guidelines for Determining Significance—Transportation and Traffic*, dated August 24, 2011. The *County of San Diego's General Plan Mobility Element* discusses the County's Level of Service criteria under Goal M-2. It requires that development projects provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County. The County maintains a list of such roads.

5.1 Road Segments

This section provides guidance for evaluating adverse environmental effects a project may have on street segments. The allowable ADT increases on LOS E/F operation roadways was obtained from County guidelines and are summarized in **Table 5-1**. The thresholds in *Table 5-1* are based upon average operating conditions on County roadways. Exceeding the thresholds in Table 5-1 would result in a significant impact. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

TABLE 5-1
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON
MOBILITY ELEMENT ROAD SEGMENTS
ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS

Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

General Notes:

1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

5.2 Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections. **Table 5-2** was obtained from County guidelines and summarizes the allowable increases in delay or traffic volumes at signalized and unsignalized intersections. Exceeding the thresholds in *Table 5-2* would result in a significant impact.

TABLE 5-2
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON INTERSECTIONS
ALLOWABLE INCREASES ON CONGESTED INTERSECTIONS

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
LOS F	Either a Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

General Notes:

1. A critical movement is an intersection movement (right-turn, left-turn, through-movement) that experiences excessive queues, which typically operate at LOS F.
2. By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project is responsible for mitigating its share of the cumulative impact.
3. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.
4. For determining significance at signalized intersections with LOS F conditions, the analysis must evaluate both the delay **and** the number of trips on a critical movement, exceedance of either criteria result in a significant impact.

Signalized Intersections—Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a signalized intersection:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in *Table 5-2*.
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

Unsignalized Intersections—The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic impact on an unsignalized intersection as listed in *Table 5-2* and described as text below:

- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or

- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

6.0 ANALYSIS OF EXISTING CONDITIONS

6.1 Peak Hour Intersection Levels of Service

Table 6–1 summarizes the existing intersection operations in the project vicinity. As seen in *Table 6–1*, all intersections are calculated to currently operate at LOS D or better except for the following intersections:

- Jamacha Boulevard (SR-54) / Campo Road (SR-94) – LOS E during the PM peak hour.
- Campo Road (SR-94) / Jamacha Road (SR-54) – LOS E during the PM peak hour.

Appendix D contains the existing intersection analysis worksheets.

TABLE 6-1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
1. Sweetwater Springs Blvd / SR-94 WB On-Ramp / Agua Dulce Blvd	Signal	AM PM	42.1 40.8	D D
2. Sweetwater Springs Blvd / SR-94 EB Ramps	Signal	AM PM	18.7 37.1	B D
3. Sweetwater Springs Blvd / Austin Dr	Signal	AM PM	36.1 31.9	D C
4. Sweetwater Springs Blvd / Project Dwy #1	DNE	AM PM	<i>DNE</i> <i>DNE</i>	<i>DNE</i> <i>DNE</i>
5. Sweetwater Springs Blvd / Jamacha Blvd (SR-54)	Signal	AM PM	23.8 24.0	C C
6. Jamacha Blvd (SR-54) / Huron St / San Diego St	Signal	AM PM	9.2 8.6	A A
7. Jamacha Blvd (SR-54) / Project Dwy #2 / Folex Wy	Signal	AM PM	14.6 14.6	B B
8. Jamacha Blvd (SR-54) / Campo Rd (SR-94)	Signal	AM PM	41.4 60.4	D E
9. Campo Rd (SR-94) / Jamacha Rd (SR-54)	Signal	AM PM	49.2 66.2	D E

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.

General Notes:

1. **BOLD** typeface indicates an LOS E (or worse) operating intersections.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

6.2 Daily Street Segment Levels of Service

Table 6–2 summarizes the existing roadway segment operations. As seen in *Table 6–2*, all the study area segments are calculated to currently operate at LOS C or better.

TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Existing Classification	Capacity (LOS E) ^a	ADT ^b	LOS ^c
Sweetwater Springs Blvd				
SR-94 EB Ramps to Austin Dr	4.1B Major Road <i>with TWLTL</i>	34,200	20,920	B
Austin Dr to Jamacha Blvd (SR-54)	4.1B Major Road <i>with TWLTL</i>	34,200	15,420	B
Jamacha Blvd (SR-54)				
San Miguel St to Huron St	4.1B Major Road <i>with TWLTL</i>	34,200	17,060	B
Huron St to Sweetwater Springs Blvd	4.1B Major Road <i>with Intermittent Turn Lanes</i>	34,200	23,140	C
Sweetwater Springs Blvd to Folex Wy	4.1B Major Road <i>with Left-Turn Pockets</i>	34,200	17,120	B
Folex Wy to Campo Rd (SR-94)	4.1B Major Road <i>with TWLTL</i>	34,200	17,430	B

Footnotes:

- a. Capacities based on County of San Diego Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.

7.0 TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

7.1 Project Trip Generation

The project was assumed to develop 126 condominium units and a 1.14-acre public park. Trip generation calculations for the proposed project were based on SANDAG rates for “residential – condominium” and “parks – regional (developed).”

The total project is calculated to generate 1,031 ADT with 84 total AM peak hour trips (18 inbound/ 66 outbound) and 103 total PM peak hour trips (72 inbound/ 31 outbound). **Table 7–1** shows the total trip generation summary for the proposed project.

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate ^a	Volume	% of ADT	In:Out	Volume		% of ADT	In:Out	Volume	
					Split	In	Out		Split	In	Out
Condominiums	126 DU	8/ DU	1,008	8%	20:80	16	65	10%	70:30	71	30
Public Park	1.14 acres	20/ acre	23	13%	50:50	2	1	9%	50:50	1	1
Total		–	1,031	–	–	18	66	–	–	72	31

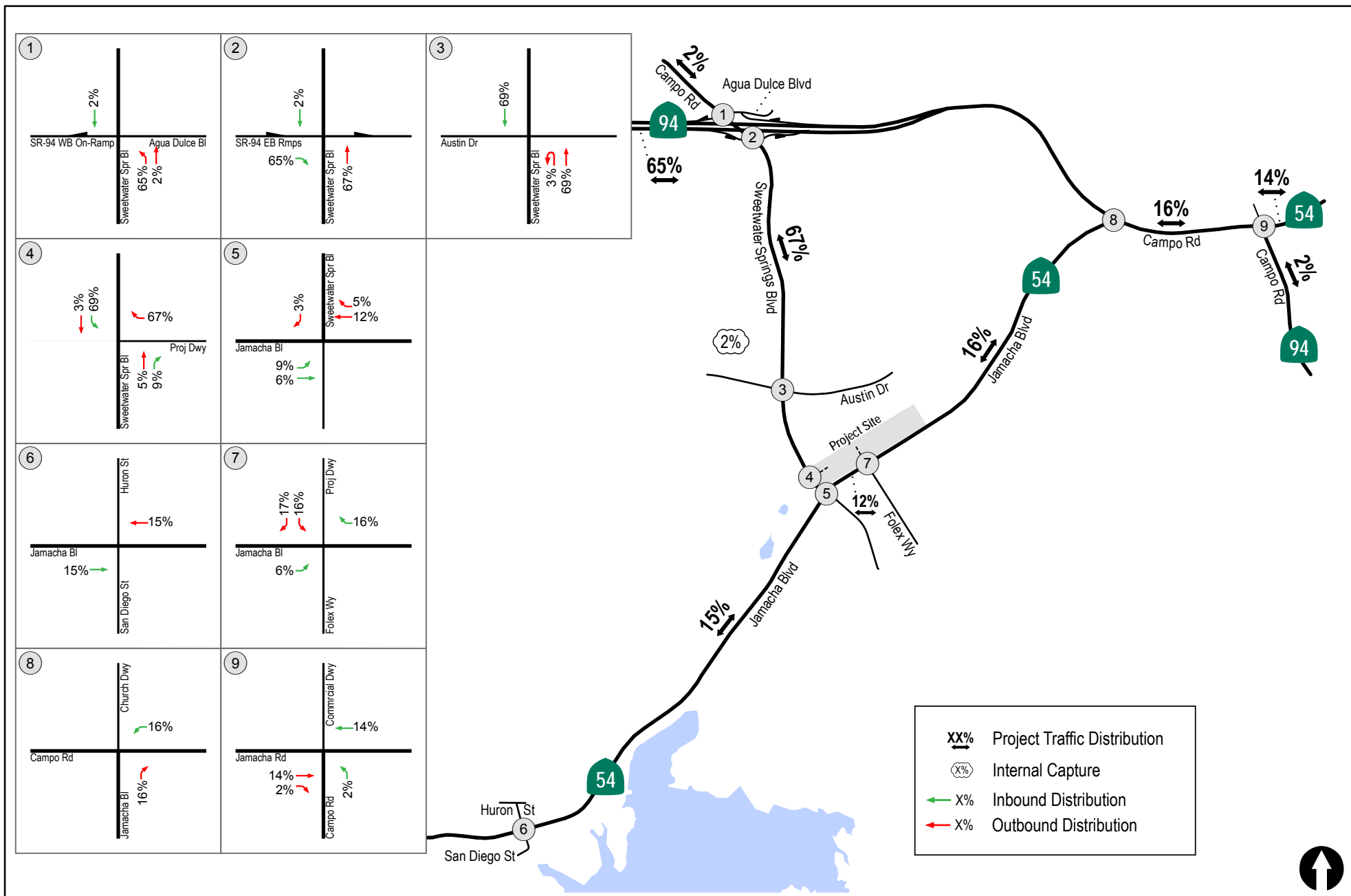
Footnotes:

- Rate is based on SANDAG’s (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- See Section 2.2 of the traffic study which discusses the diminished project since the traffic study calculations were completed.

7.2 Project Trip Distribution and Assignment

Project trip distribution and assignment were based on SANDAG Series 12 Select Zone Assignment. The Select Zone Assignment utilizes the land use and roadway network assumptions in the regional traffic model and distributes the project traffic. This distribution is based on project location and its proximity to freeways and major roads, employment, retail and educational opportunities in the vicinity etc.

Figure 7–1 depicts the project traffic distribution. **Figure 7–2** depicts the proposed project traffic volume assignment based on the distribution. **Figure 7–3** depicts the Existing + Project traffic volumes.



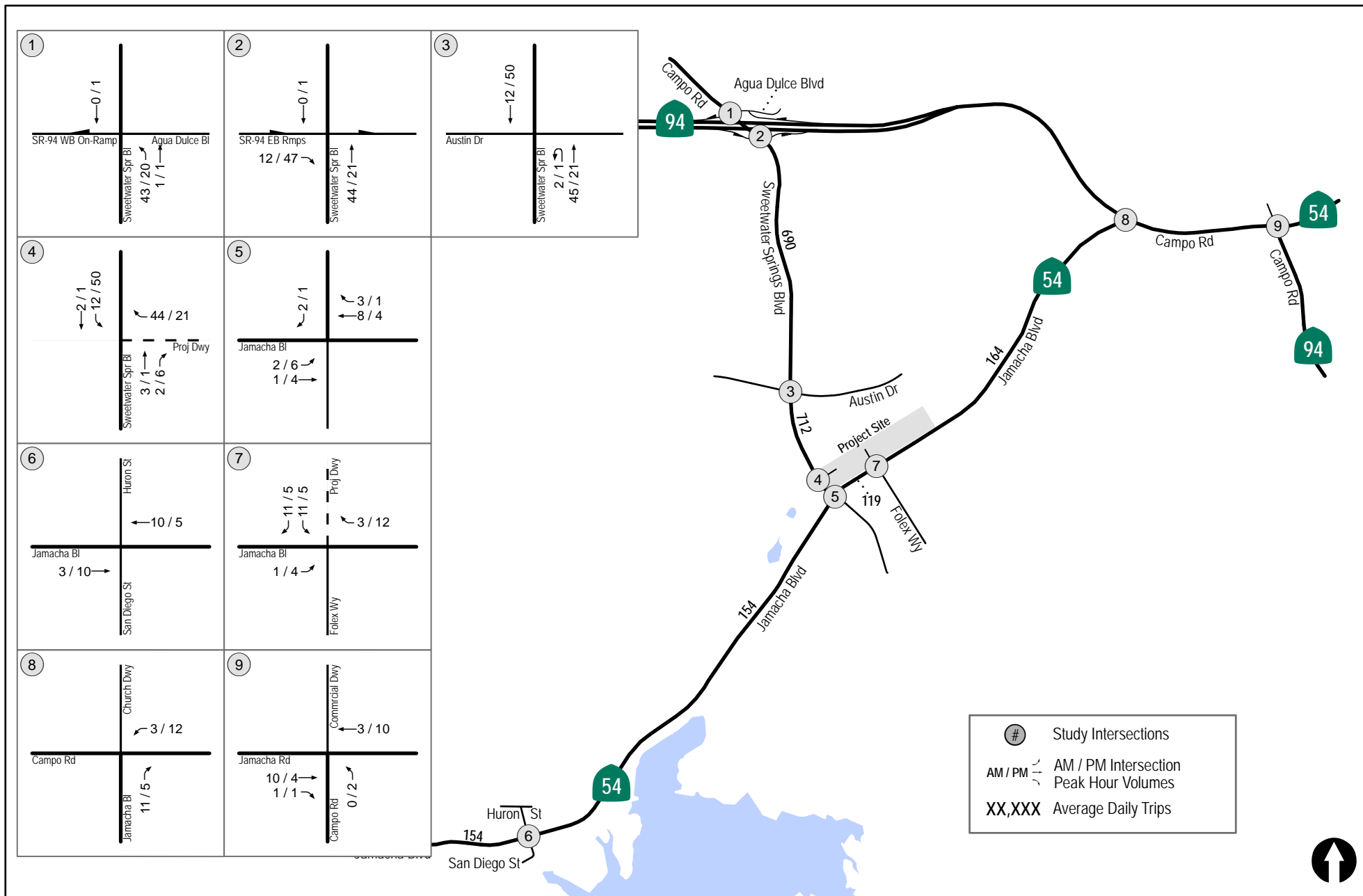


Figure 7-2

Project Traffic Volumes

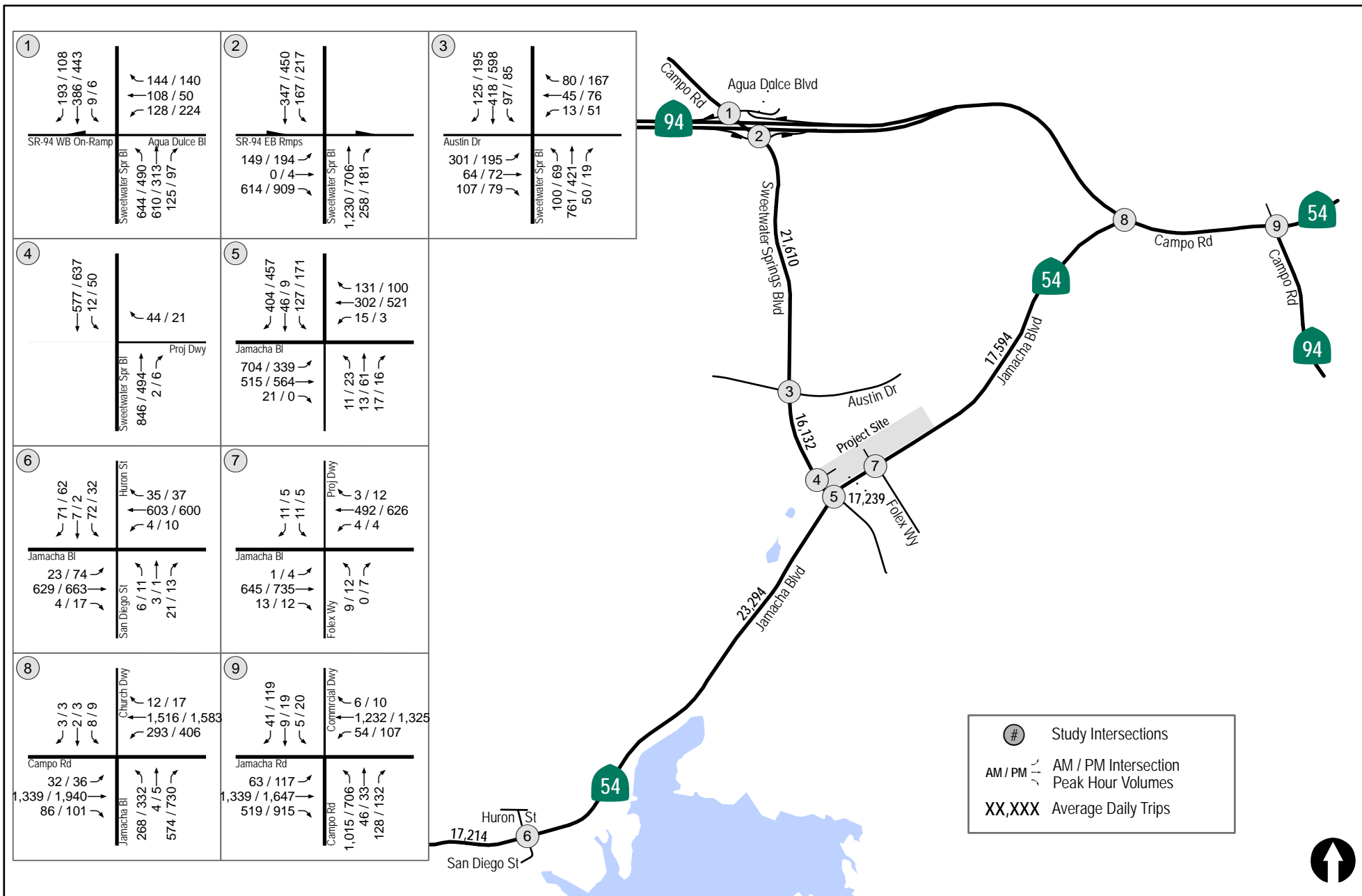


Figure 7-3
Existing + Project Traffic Volumes

8.0 CUMULATIVE PROJECTS

8.1 Summary of Cumulative Projects Trips

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG coordinated with the County of San Diego staff regarding the cumulative projects in the study area. LLG also researched other projects in the vicinity such as the Cuyamaca College Expansion, Simpson Farms, Jamul Indian Village etc. and developed the following list:

8.2 Description of Projects

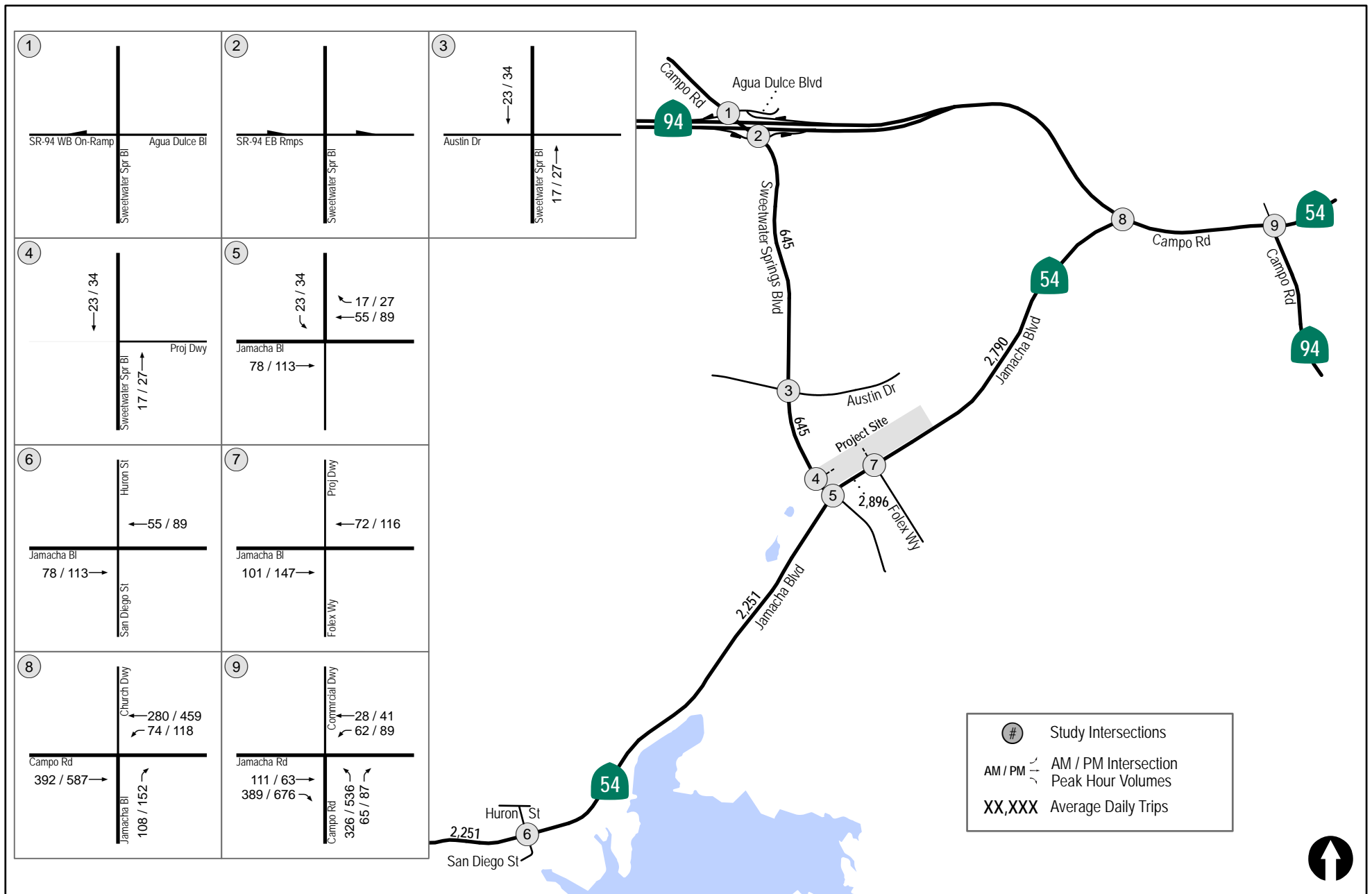
1. ***Cuyamaca College Facilities Master Plan Update*** proposes an increase in student enrollment from the current 8,900 enrolled students to 11,100; a net increase of 2,200 students during the implementation of the Facilities Master Plan Update. The Cuyamaca College campus is bounded by Fury Lane to the east and Jamacha Road (SR 54) to the south, and is approximately three (3) miles east of the Community of Spring Valley and 5 miles south of the City of El Cajon, located within the Community of Valle De Oro in the County of San Diego. With the increased enrollment of 2,200 students for a total campus enrollment of 11,100 students, the college is calculated to generate an additional 2,640 ADT with 317 AM peak hour trips (254 inbound/63 outbound) and 238 AM peak hour trips (143 inbound/95 outbound).
2. ***Simpson Farms*** project is located on the northeast corner of the SR 94 / Jefferson Road intersection in the Jamul/Dulzura Planning Area of San Diego County. The project proposes to develop 120,000 square feet of commercial space and 94 single-family residential lots ranging between 1 to 2 acres in size. The project is calculated to generate approximately 7,360 new ADT with 305 trips during the AM peak hour (167 entering and 138 exiting trips) and 646 trips during the PM peak hour (346 entering and 300 exiting).
3. ***TPM 20550 (Morgan Minor Subdivision)*** proposes to construct 2 single-family estate homes. The project site is proposed north of the Procter Valley Road/Poplar Meadow Lane intersection. The project was manually calculated using SANDAG's *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region Trip Rates* (April, 2002) for estate homes. The project trips were calculated to generate 24 ADT with 1 inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.
4. ***TM 5154 RPL1 (Hendrix Subdivision)*** is located east of Campo Road on Las Palmas Road. The project proposes to develop 5 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 60 ADT with 2 inbound/3 outbound trips during the AM peak-hour and 4 inbound/2 outbound trips during the PM peak-hour.
5. ***TM 5213 RPL2 (Mintz Subdivision)*** is located north of Skyline Truck Trail and east of Hidden Trail drive. The project proposes to develop approximately 25 acres of land into 10 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April,

2002) for estate homes. The project is calculated to generate 120 ADT with 3 inbound/7 outbound trips during the AM peak-hour and 8 inbound/4 outbound trips during the PM peak-hour.

6. **TM 5289 RPL2 (Jamul Highlands Subdivision)** proposes to construct 25 single-family estate homes. The project site is proposed south of the Valley Road/Jamul Highlands Road intersection. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 300 ADT with 7 inbound/19 outbound trips during the AM peak-hour and 21 inbound/9 outbound trips during the PM peak-hour.
7. **TPM 20626** proposes to construct 3 single-family estate homes. The project site is proposed on the west side of Procter Valley Road, just north of the Procter Valley Road/Melody Road intersection. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak-hour and 3 inbound/1 outbound trips during the PM peak-hour.
8. **TPM 20628 RPLI (Yacoo Minor Subdivision)** proposes to construct 4 single-family estate homes. The project site is proposed on Schlee Canyon Road north of Procter Valley Road. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 48 ADT with 1 inbound/3 outbound trips during the AM peak-hour and 4 inbound/1 outbound trips during the PM peak-hour.
9. **Olive Hills Residential Development** is located just east of the proposed project and south of Olive Vista Drive. The project proposes to develop 20 single-family estate homes. The project is calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.
10. **TPM 20599 RPLI (Blanco Parcel Map)** proposes to construct 4 single-family estate homes. The project site is proposed on the east side of SR-94, north of the Melody Road. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 48 ADT with 1 inbound/3 outbound trips during the AM peak hour and 4 inbound/1 outbound trips during the PM peak-hour.
11. **TPM 20868 (Stein barth Minor Subdivision)** is located just north of the proposed project and south of Olive Vista Drive. The project proposes to develop 2 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 24 ADT with 1 inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.
12. **TPM 20594 (Pioneer Minor Subdivision)** is located just west of the proposed project and north of Melody Lane. The project proposes to develop 3 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak hour and 3 inbound/1 outbound trips during the PM peak-hour.

13. **Otay Ranch – Village 19** is located south west of the proposed project and south of Melody Lane. The project proposes to develop 20 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.
14. **Jamul Estates II** is located just north east of the proposed project. The maximum allowable developable lots are 68 single-family estate homes based on the current zoning. Therefore, the project trips were manually calculated using SANDAG's Trip Rates (April, 2002) for estate homes. The project is calculated to generate 816 ADT with 20 inbound/46 outbound trips during the AM peak-hour and 57 inbound/24 outbound trips during the PM peak-hour.
15. **Peaceful Valley Ranch** project proposes the subdivision of 181.31 acres for an estate residential development, equestrian uses and amenities, and fire service facilities. The project is located east of SR-94 and will use the intersection of SR-94 and Melody Road as a single access point. The total project is calculated to generate approximately 750 ADT with 43 inbound/46 outbound trips during the AM peak hour and 56 inbound/46 outbound trips during the PM peak hour.
16. **Jamul Indian Village** is a proposed tribal gaming project located on a 6.2 acre reservation held in trust by the United States for the benefit of the Jamul Indian Village. The project proposes to develop a gaming facility with a maximum total gaming area square footage of 70,000 square feet and 133,000 square feet for support uses such as food and beverage space, public space, gaming support areas, cage area, administration space, storage and mechanical space and an employee area. The total project is calculated to generate approximately 9,000 ADT with 420 inbound/179 outbound trips during the AM peak hour and 533 inbound/472 outbound trips during the PM peak hour.

Figure 8-1 shows the cumulative project traffic volumes assignment. The Existing + Project + Cumulative projects traffic volumes are shown on **Figure 8-2**.



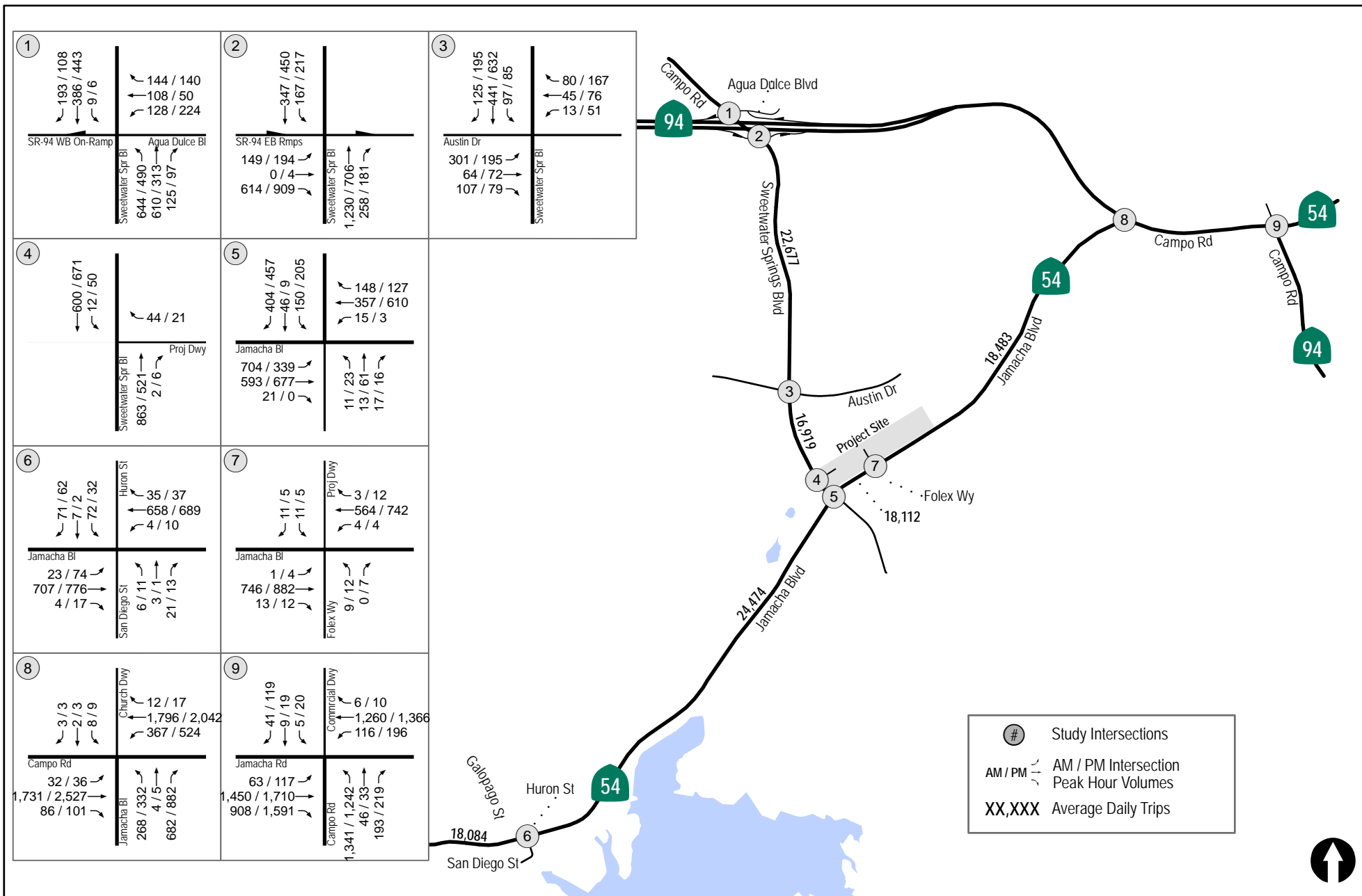


Figure 8-2
Existing + Project + Cumulative Projects Traffic Volumes

9.0 NEAR-TERM ANALYSIS

9.1 Existing + Project

9.1.1 Intersection Analysis

Table 9–1 summarizes the Existing + Project intersections level of service. As seen in *Table 9–1*, all intersections are calculated to continue to operate at LOS D or better, except for the following intersections:

- Jamacha Boulevard (SR-54) / Campo Road (SR-94) – LOS E during the PM peak hour.
- Campo Road (SR-94) / Jamacha Road (SR-54) – LOS E during the PM peak hour.

Based on the County of San Diego’s significance criteria, no significant direct impacts are calculated on the above study area intersections as the project traffic contribution does not exceed the allowable thresholds.

Appendix E contains the Existing + Project intersection analysis worksheets.

9.1.2 Segment Operations

Table 9–2 summarizes the Existing + Project roadway segment level of service. As seen in *Table 9–2*, all the segments are calculated to continue to operate at LOS C or better.

Based on the County of San Diego’s significance criteria, no significant direct impacts are calculated on the study area street segments.

9.2 Existing + Project + Cumulative Projects

9.2.1 Intersection Analysis

Table 9–1 summarizes the Existing + Project + Cumulative Projects intersections level of service. As seen in *Table 9–1*, all intersections are calculated to operate at LOS D or better, except the following intersections:

- Jamacha Boulevard (SR-54) / Campo Road (SR-94) – LOS F during the PM peak hour.
- Campo Road (SR-94) / Jamacha Road (SR-54) – LOS F during the PM peak hour.

Based on the County of San Diego’s significance criteria, **significant cumulative impacts** are identified at the following intersections:

- Jamacha Boulevard (SR-54) / Campo Road (SR-94) – LOS F during the PM peak hour.
- Campo Road (SR-94) / Jamacha Road (SR-54) – LOS F during the PM peak hour.

Mitigation measures for this impact are discussed in detail in *Section 12.0*.

Appendix F contains the Existing + Project + Cumulative Projects intersection analysis worksheets

9.2.2 *Segment Operations*

Table 9–2 summarizes the Existing + Project + Cumulative Projects roadway segment level of service. As seen in *Table 9–2*, all the segments are calculated to continue to operate at LOS C or better.

Based on the County of San Diego’s significance criteria, no significant cumulative impacts are calculated on the study area street segments.

**TABLE 9-1
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Existing + Project			Existing + Project + Cumulative Projects			Impact Type
			Delay ^a	LOS ^b	Delay	LOS	Δ ^c	Delay	LOS	Δ	
1. Sweetwater Springs Blvd / SR-94 WB On-Ramp/Agua Dulce Blvd	Signal	AM	42.1	D	48.7	D	6.6	48.7	D	0.0	None
		PM	40.8	D	44.5	D	3.7	44.5	D	0.0	None
2. Sweetwater Springs Blvd / SR-94 EB Ramps	Signal	AM	18.7	B	19.1	B	0.4	19.1	B	0.0	None
		PM	37.1	D	45.0	D	7.9	45.0	D	0.0	None
3. Sweetwater Springs Blvd / Austin Dr	Signal	AM	36.1	D	38.4	D	2.3	40.1	D	1.7	None
		PM	31.9	C	33.7	C	1.8	35.4	D	1.7	None
4. Sweetwater Springs Blvd / Project Dwy #1	OWSC ^d	AM	<i>DNE</i>	<i>DNE</i>	12.2	B	– ^e	12.3	B	– ^e	None
		PM	<i>DNE</i>	<i>DNE</i>	10.1	B	– ^e	10.2	B	– ^e	None
5. Sweetwater Springs Blvd / Jamacha Blvd (SR-54)	Signal	AM	23.8	C	23.9	C	0.1	24.3	C	0.4	None
		PM	24.0	C	24.1	C	0.1	25.1	C	1.0	None
6. Jamacha Blvd (SR-54) / Huron St/ San Diego St	Signal	AM	9.2	A	9.3	A	0.1	9.4	A	0.1	None
		PM	8.6	A	8.7	A	0.1	8.9	A	0.2	None
7. Jamacha Blvd (SR-54) / Project Dwy #2/ Folex Wy	Signal	AM	14.6	B	16.2	B	1.6	16.4	B	0.2	None
		PM	14.6	B	16.4	B	1.8	16.5	B	0.1	None
8. Jamacha Blvd (SR-54) / Campo Rd (SR-94)	Signal	AM	41.4	D	43.0	D	1.6	50.5	D	7.5	None
		PM	60.4	E	61.4	E	1.0	129.9	F	68.5	Cumulative
9. Campo Rd (SR-94) / Jamacha Road (SR-54)	Signal	AM	49.2	D	49.3	D	0.1	53.7	D	4.4	None
		PM	66.2	E	66.4	E	0.2	99.1	F	32.7	Cumulative

Footnotes:

- Average delay expressed in seconds per vehicle.
- Level of Service.
- “Δ” denotes the project-induced increase in delay for signalized intersections and project traffic added to the critical movement for unsignalized intersections operating at LOS E or F only.
- OWSC – One-Way Stop-Controlled. Project driveway limited to right-in/right-out movements only.
- Project trips added to the critical movement not shown as intersection operates at LOS B.

General Notes:

- BOLD** typeface indicates a potentially significant impact.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 9-2
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Existing Classification	Capacity (LOS E) ^a	Existing		Existing + Project		Existing + Project + Cumulative Projects		Impact Type
			ADT ^b	LOS ^c	ADT	LOS	ADT	LOS	
Sweetwater Springs Blvd									
SR-94 EB Ramps to Austin Dr	4.1B Major Road with TWLTL	34,200	20,920	B	21,610	B	22,255	B	None
Austin Dr to Jamacha Blvd (SR-54)	4.1B Major Road with TWLTL	34,200	15,420	B	16,132	B	16,777	B	None
Jamacha Blvd (SR-54)									
San Miguel St to Huron St	4.1B Major Road with TWLTL	34,200	17,060	B	17,214	B	19,465	B	None
Huron St to Sweetwater Springs Blvd	4.1B Major Road with Intermittent Turn Lanes	34,200	23,140	C	23,294	C	25,545	C	None
Sweetwater Springs Blvd to Folex Wy	4.1B Major Road with Left-Turn Pockets	34,200	17,120	B	17,239	B	20,135	B	None
Folex Wy to Campo Rd (SR-94)	4.1B Major Road with TWLTL	34,200	17,430	B	17,594	B	20,384	B	None

Footnotes:

- a. Capacities based on County of San Diego Roadway Classification Table.
- b. ADT - Average Daily Traffic Volumes.
- c. LOS - Level of Service.

10.0 LONG-TERM ANALYSIS

10.1 Traffic Volumes

As included in the *County of San Diego General Plan Mobility Element*, the project site is zoned as a "Holding Area (S90)," which prevents urban or non-urban development on the site until precise zoning regulations are prepared. Based on its current zoning ("holding area"), it is assumed that no development was included in the General Plan for the project site. Therefore, LLG utilized the ADT volumes from the *County of San Diego GP Mobility Element* volumes (*Spring Valley*) for the without project scenario.

The project is processing a General Plan Amendment (GPA) and a Rezone. As part of the GPA, the project site is proposed to be rezoned to allow residential uses. To calculate the GPA volumes, the project volumes were added onto current GP volumes.

Figure 10-1 shows the Long-Term Without Project (Adopted GP) traffic volumes. **Figure 10-2** shows the Long-Term With Project (Proposed GPA) traffic volumes.

10.2 Long-Term with Adopted GP Segment Operations

Table 10-1 summarizes the Long-Term roadway segment level of service. As seen in *Table 10-1*, all the street segments are calculated to operate at LOS C or better.

10.3 Long-Term with Proposed GPA Segment Operations

Table 10-1 summarizes the Long-Term + Project roadway segment level of service. As seen in *Table 10-1*, with the proposed GPA, all the street segments are calculated to continue to operate at LOS D or better.

The analysis shows that no GP Mobility Element inconsistencies would occur as a result of the GPA.

TABLE 10-1
LONG-TERM STREET SEGMENT OPERATIONS

Street Segment	Mobility Element Classification	Capacity (LOS E) ^a	Long-Term with Adopted GP		Long-Term with Proposed GPA	
			ADT ^b	LOS ^c	ADT	LOS
Sweetwater Springs Blvd						
SR-94 EB Ramps to Austin Dr	4.1A Major Road with Raised Median	37,000	30,200	D	30,890	D
Austin Dr to Jamacha Blvd (SR-54)	4.1A Major Road with Raised Median	37,000	27,000	C	27,712	C
Jamacha Blvd (SR-54)						
San Miguel St to Huron St	4.1A Major Road with Raised Median	37,000	26,500	C	26,654	C
Huron St to Sweetwater Springs Blvd	4.1A Major Road with Raised Median	37,000	28,300	C	28,454	C
Sweetwater Springs Blvd to Folex Wy	4.1A Major Road with Raised Median	37,000	18,800	B	18,919	B
Folex Wy to Calavo Drive	4.1A Major Road with Raised Median	37,000	16,700	B	16,864	B
Calavo Drive to Campo Rd (SR-94)	4.1A Major Road with Raised Median	37,000	27,200	C	27,364	C

Footnotes:

- a. Capacities based on County of San Diego Roadway Classification Table.
- b. ADT - Average Daily Traffic Volumes.
- c. LOS - Level of Service.





11.0 ACCESS AND OTHER ISSUES

The following section discusses the project access and on-site circulation.

11.1 Project Access and On-Site Circulation

Access to the project site is proposed via two (2) driveways. A description of the driveway configuration and conceptual design is included below.

Jamacha Boulevard (SR-54) Access Point

The primary access to the project site is proposed via the existing traffic signal on Jamacha Boulevard (SR-54). The project proposes to construct the north leg of the existing Jamacha Boulevard (SR-54) / Folex Way intersection. It is recommended that the following improvements be constructed at the project driveway on Jamacha Boulevard (SR-54):

- Construct an exclusive eastbound left-turn lane on Jamacha Boulevard (SR-54) that provides 120 feet of storage with a 70-foot bay taper.
- Restripe the exclusive northbound left-turn lane to a shared thru/left-turn lane.

Sweetwater Springs Boulevard Access Point

The project proposes an access driveway on Sweetwater Springs Boulevard. This driveway is proposed to allow right-in/right-out movements and inbound left-turns from southbound Sweetwater Springs Boulevard. Left-turn movements exiting the driveway should be prohibited. The driveway will be controlled by a stop sign. It is recommended that the following improvements be constructed at the project driveway on Sweetwater Springs Boulevard:

- Construct an exclusive southbound left-turn pocket on Sweetwater Springs Boulevard that provides 100 feet of storage with a 60-foot bay taper.
- Construct a median on Sweetwater Springs Boulevard that would prohibit outbound left-turn movements.

As shown in the analysis results of this study in *Section 9.0*, both driveways are calculated to operate at LOS B. Striping Plans for both these improvements have been submitted under separate cover as part of the grading plan submittal. Conceptual Plans are provided in **Appendix G**.

12.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES

Per the County's significance thresholds and the analysis methodology presented in this report, project-related traffic is calculated to cause significant impacts within the study area. The following section identifies the significance of impacts and recommended mitigation measures to address operating deficiencies. These improvements, if implemented, would improve efficiency of traffic flow and return intersection operations to below a level of significance.

12.1 Significance of Impacts

12.1.1 *Direct Impacts*

Under the Existing + Project conditions, no significant direct impacts were identified at the study area intersections and street segments as summarized below in **Table 12-1**.

TABLE 12-1
DIRECT IMPACTS

Facility Type	Location
Intersections	<ul style="list-style-type: none">• None
Street Segments	<ul style="list-style-type: none">• None

12.1.2 *Cumulative Impacts*

Under Existing + Project + Cumulative projects conditions, project related traffic is calculated to cause significant cumulative impacts within the study area, as summarized below in **Table 12-2**.

TABLE 12-2
CUMULATIVE IMPACTS

Facility Type	Location
Intersections	<ul style="list-style-type: none">• Jamacha Blvd (SR-54) / Campo Rd (SR-94)• Campo Rd (SR-94) / Jamacha Road (SR-54)
Street Segments	<ul style="list-style-type: none">• None

12.2 Mitigation Measures

12.2.1 *Direct Impacts*

Intersections

Based on the County of San Diego's significance criteria, no significant direct impacts are identified at the study area intersections. Therefore, no mitigation measures are required.

Street Segments

Based on the County of San Diego's significance criteria, no significant direct impacts are calculated on the study area street segments. Therefore, no mitigation measures are required.

12.2.2 Cumulative Impacts

Intersections

Under Existing + Project + Cumulative projects conditions, the project is calculated to have significant cumulative impact at two (2) intersections. The following summarizes the recommended mitigation measures:

- **Jamacha Blvd (SR-54) / Campo Rd (SR-94)** – Payment of the appropriate County Traffic Impact Fee (TIF) will mitigate the cumulative impact at this intersection. The County Board of Supervisors adopted a TIF ordinance, which provides a mechanism for the County to obtain funding to mitigate anticipated cumulative transportation/circulation impacts, by requiring payment of an impact fee designated in the ordinance. The County updated the TIF Program in December 2012. Under the provisions of State CEQA Guidelines section 15130(a)(3), payment of the fee “to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact” allows an EIR to “determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant.”
- **Campo Rd (SR-94) / Jamacha Road (SR-54)** – Payment of the appropriate County TIF will mitigate the cumulative impact at this intersection. The County Board of Supervisors adopted a TIF ordinance, which provides a mechanism for the County to obtain funding to mitigate anticipated cumulative transportation/circulation impacts, by requiring payment of an impact fee designated in the ordinance. The County updated the TIF Program in December 2012. Under the provisions of State CEQA Guidelines section 15130(a)(3), payment of the fee “to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact” allows an EIR to “determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant.”

Street Segments

Based on the County of San Diego’s significance criteria, no significant cumulative impacts are identified on the study area street segments. Therefore, no mitigation measures are required.